

### **In the Claims**

1. (Currently Amended) A computerized method comprising:  
producing a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process;  
calculating a minimum description length (MDL) value for each of the set of FMMs; ~~and~~  
selecting a FMM from the set of FMMs based on the corresponding MDL values;  
and  
generating a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.
2. (Original) The method of claim 1, wherein each parameter value is a model-complexity parameter for the EM process.
3. (Original) The method of claim 1, wherein selecting comprises selecting the FMM from the set of FMMs corresponding to the MDL having a smallest MDL value.
- 4-5. (Cancelled)
6. (Currently amended) The method of claim 1, further comprising applying the FMM selected from the set of FMMs to cluster a stream of data.
7. (Currently amended) The method of claim 6, wherein the FMM selected from the set of FMMs defines a cluster pattern.
8. (Currently Amended) A machine-readable medium having executable instructions to cause a device to perform ~~a method~~functions comprising:  
producing a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process;  
calculating a minimum description length (MDL) value for each of the set of FMMs; ~~and~~

selecting a FMM from the set of FMMs based on the corresponding MDL values;  
and  
generating a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.

9. (Original) The machine-readable medium of claim 8, wherein each parameter value is a model-complexity parameter for the EM process.

10. (Original) The machine-readable medium of claim 8, wherein selecting comprises selecting the FMM from the set of FMMs corresponding the MDL having a smallest MDL value.

11-12. (Cancelled)

13. (Currently amended) The machine-readable medium of claim 8, wherein the functions further comprising applying the FMM from the set of FMMs to cluster a stream of data.

14. (Currently amended) The machine-readable medium of claim 13, wherein the FMM selected from the set of FMMs defines a cluster pattern.

15. (Currently Amended) A system comprising:  
a processor coupled to a memory through a bus; and  
a model selection process executed by the processor from the memory to cause the processor to produce a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process, to calculate a minimum description length (MDL) value for each of the set of FMMs, and to select a FMM from the set of FMMs based on the corresponding MDL values, and to generate a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.

16. (Original) The system of claim 15, wherein each parameter value is a model-complexity parameter for the EM process.
17. (Original) The system of claim 15, wherein the model selection process further causes the processor, when selecting, to select the FMM from the set of FMMs corresponding to the MDL having a smallest value.
- 18-19. (Cancelled)
20. (Currently amended) The system of claim 15, wherein the model selection process further causes the processor to apply the FMM selected from the set of FMMs to cluster a stream of data.
21. (Currently amended) The system of claim 20, wherein the FMM selected from the set of FMMs defines a cluster pattern.
22. (Currently Amended) An apparatus comprising:  
means for producing a set of finite mixture models (FMM)s from a set of parameter values and training data using an Expectation Maximization (EM) process;  
means for calculating a minimum description length (MDL) value for each of the set of FMMs; ~~and~~  
means for selecting a FMM from the set of FMMs based on the corresponding MDL values; and  
means for generating a quantized stream of data by applying the FMM to a data stream if the FMM selected from the set of FMMs defines a vector quantized codebook.
23. (Original) The apparatus of claim 22, wherein each parameter value is a model-complexity parameter for the EM process.

24. (Original) The apparatus of claim 22, wherein the means for selecting comprises means for selecting the FMM from the set of FMMs corresponding to the MDL having a smallest MDL value.

25-26. (Cancelled)

27. (Currently amended) The apparatus of claim 22, further comprising a means for applying the FMM selected from the set of FMMs to cluster a stream of data.

28. (Currently amended) The apparatus of claim 27, wherein the FMM selected from the set of FMMs defines a cluster pattern.